



THE OCULAR IMMUNOLOGY
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Clinical: IOL Explantation in Patients with Uveitis

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Cataract surgery with intraocular lens (IOL) implantation has become an increasingly successful surgical procedure in patients who develop cataract as a consequence of uveitis or its treatment. An increasing number of ophthalmologists recognize the consequence of chronic low grade inflammation and therefore treat uveitis patients more aggressively, so that permanent structural damage to structures critical to good vision (e.g., macula and optic nerve) is avoided. Visual rehabilitation of patients with uveitic cataract depends on two essential components: the success of the surgery itself, including the postoperative course; and the degree of prior permanent structural damage that the uveitis has caused. Glaucoma, hypotony, pupillary membrane formation and macular edema may limit the final visual result even after technically perfect cataract surgery. Most uveitis experts have agreed over the past decade that an in-the-bag posterior chamber IOL (PC-IOL) can be well tolerated in patients with a history of uveitis provided the uveitis has been perfectly quiet for a sustained period prior to surgery and provided that the uveitis remains inactive after surgery. However, complications associated with the use of lens implants continue to cause serious problems, leading in some instances to the need for removal of the IOL. We reviewed the clinical records of 1463 patients with uveitis treated during a period of 20 years. All clinical evaluations were performed by the same physician (Dr. Foster). We identified those patients who had had cataract surgery with IOL implantation (by Dr. Foster) and those who had subsequently had the IOL removed. Nineteen patients had IOL explantation over the 20 year period. The mean age of the patients was 42 years, with a range of 5 to 69 years. Fourteen patients were female and five were male. Twelve were white, six were black, and one was Asian. The uveitis was non-granulomatous in eight patients and granulomatous in eleven. The most common location was pan-uveitis (12 patients); six patients had intermediate uveitis and one anterior uveitis. The most common diagnoses were sarcoidosis, juvenile rheumatoid arthritis, and pars planitis. The average duration of the uveitis was 146 months (range 44 to 312 months). The average follow-up time was 60 months (range 5 to 147 months). Seven eyes (37%) improved two or more lines of Snellen acuity after IOL explantation. Five eyes had no improvement in vision, but the progressive degradation of vision pre-operatively was halted. The vision in seven eyes continued to deteriorate after IOL explanation. Only nine patients, of these nineteen, had control of the inflammation prior to cataract surgery for at least 2 1/2 months. Ten did not have any supplemental pre-operative preparation with any topical or systemic anti-inflammatory medication before surgery. The average interval from implantation to IOL removal was 28 months (range 2 to 91 months). The most

frequent reasons for IOL removal were uncontrolled inflammation, and membrane formation with progressive hypotony. Five of the nineteen patients described in this report were our patients . We thought we were easily able to discriminate between those patients who could safely and those who could not safely have a lens implant placed at the time of removal of uveitic cataract. Clearly this was not so. The results of this study show, we believe, that patients with the inflammation affecting the intermediate region of the eye, and especially those with systemic disease which is unlikely to be cured or "burn out" soon, are at an especially high risk for IOL intolerance, with membrane formation, membrane contraction, progressive hypotony, and/or uncontrolled inflammation. Removal of an IOL in a patient with IOL intolerance after uveitic cataract surgery should probably be done sooner rather than later. Young JRA patients in particular probably should not even be considered for lens implantation associated with the removal of their cataract.